

[METHOD OF FORMING BOND MICROSTRUCTURE]

Abstract

A method for controlling the bond microstructures is disclosed. A Sn layer and an Au layer are sequentially formed on the two members that are to be jointed. The weight ratio of Sn/Au is 20:80 having a variation range about $\pm 3-4\%$. Next, the Sn layer and the Au layer are treated with a first temperature or a second temperature so that the Sn layer and the Au layer react to form a bond microstructure connecting two members. When the Sn layer and the Au layer are treated with the first temperature, the bond microstructure will have a layered structure. When the Sn layer and the Au layer are treated with the second temperature, the bond microstructure will have an eutectic structure. Therefore, the bond microstructures can be manufactured with a different of characteristics by treating with a different of temperatures for suiting various industrial applications.